

Express Mailing Label No. 511845130US
U. S. Patent Application No. 10/031,876
Amendment Dated December 13, 2004
Reply to Office Action Dated August 11, 2004

Amendment to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Twice Amended) A foil leak detection chamber comprising two frames connected together in an articulated manner, foils which are mounted on said frames, a test chamber composed of the foils, the frames being equipped with a double seal arrangement, and at least one bore hole in at least one of the two frames, said at least one bore hole adapted to be connected to an inlet of a vacuum pump, wherein an edge zone delimited by said two frames and said double seal arrangement is provided in which a vacuum can be created independently of said test chamber and into which said bore hole opens out.
2. (Previously Amended) The chamber according to claim 1 wherein there are located between said frames two concentric seals, the intermediate space of which forms said edge zone.
3. (Previously Amended) A foil leak detection chamber comprising two frames connected together in an articulated manner, foils which are mounted on said frames, a test chamber composed of the foils, a seal arranged between the frames, and at least one bore hole in at least one of the two frames, said at least one bore hole adapted to be connected to an inlet of a vacuum pump, wherein an edge zone is provided in which a vacuum can be created independently of said test chamber and into which said bore hole opens out, and wherein one of said frames is equipped with an inner circumferential protrusion, where the circumferential rim of said protrusion is in contact with a related foil and is so positioned that the said two foils touch each other when said frames rest on each other.
4. (Previously Amended) The chamber according to claim 3, wherein said protrusion comprises a contoured unitary component joined to one of said frames.

5. (Previously Presented) A method for using a foil leak detection chamber having first and second frames connected in an articulated manner and foils mounted to each of the frames, said method comprising the steps of:

(A) providing a seal system for said detection chamber, the seal system defining two independently evacuable areas of said detection chamber, the independently evacuable areas being (i) a test chamber, and (ii) an edge zone;

(B) placing an article in said test chamber;

(C) moving said first and second frames together;

(D) evacuating said edge zone so that a holding force between said frames is sufficient to eliminate a need to apply an outside holding force to hold said frames together; and

(E) evacuating said test chamber to test for leaks in said article.

6. (Previously Presented) The method of claim 5, wherein said providing step includes the step of providing first and second concentric seals between said first and second frames.

7. (Currently Amended) The method of claim 5, wherein said providing step includes the step of providing a circumferential protrusion on one of said first and second frames[.] wherein said circumferential protrusion is positioned so that said circumferential protrusion contacts a related foil when said frames are together.

8. (New) The foil leak detection system of claim 1, wherein said foil leak detection chamber is configured to be hand operated.

9. (New) A foil leak detection apparatus comprising:

(A) first and second frames connected together in an articulate manner;

(B) a biasing mechanism providing an opening force normally biasing said first and second frames apart;

(C) a first foil mounted on said first frame;

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- (D) a second foil mounted on said second frame, wherein said second foil and said first foil define a test chamber;
 - (E) a seal system disposed between said frames, wherein said frames and said seal system delimit an edge zone; and
 - (F) a bore hole formed in an at least one of said first and second frames and opening out into said edge zone,
 - (G) wherein said foil leak detection system is configured to operate in a mode of operation in which a frame closing force sufficient to oppose said opening force provided by said biasing mechanism is created by evacuating said edge zone.
10. (New) The foil leak detection apparatus of claim 9, wherein said biasing mechanism is provided by a spring.
11. (New) The foil leak detection apparatus of claim 9, wherein said foil leak detection apparatus is configured to be hand operated.
12. (New) The foil leak detection apparatus of claim 9, wherein said seal system comprises a pair of concentric seals.
13. (New) The foil leak detection apparatus of claim 9, wherein said apparatus further includes a concentric protrusion extending from one of said frames, said apparatus being configured so that said concentric protrusion contacts a related foil when said frames are closed.